

# Academically Gifted and Talented Curriculum and Instruction

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*To implement appropriate curriculum for gifted [and talented] students, there must be concern for the translation of theoretical principles into good practice in a holistic manner so that education of the gifted [and talented] is complete, not fragmented.*

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## Introduction

*Regulation 43-220, Gifted and Talented (R43-220)* requires that South Carolina school districts provide programs for all gifted and talented students at the elementary and secondary levels. According to *R43-220*, these programs shall provide curriculum and instruction that maximize the potential of gifted and talented students (Section II. A. 1. a.). More specifically, programs for the gifted and talented must reflect the following curricular and instructional characteristics (Section II. A. 2.):

- a. Content, process, and product standards that exceed the state-adopted standards for all students;
- b. Goals and indicators that require students to demonstrate depth and complexity of knowledge and skills;
- c. Instructional strategies that accommodate the unique needs of gifted and talented learners;
- d. A confluent approach that incorporates acceleration and enrichment;
- e. Opportunities for worldwide communication and research.

This chapter addresses curriculum requirements for gifted education programs, as well as recommended instructional provisions for gifted and talented students in the general education classroom.

## **Curriculum for Gifted Education Programs**

The curriculum for gifted education programs must be, not only different from the basic core curriculum, but defensible—i.e., matching the needs and abilities of gifted and talented students. Gifted and talented learners require a multi-faceted curriculum that utilizes approaches based on content advancement, analysis of abstract themes or concepts, development of complex thinking processes, and transformation of learning into creative products. Instructional strategies for the gifted and talented should include inquiry-based learning, group and individual problem solving, and questioning that encourages critical and creative thinking.

The curriculum plan should be written to include goals and indicators for the performance of gifted and talented students. The following checklist of curriculum components is intended as a guide for the on-going curriculum development process.

### **Curriculum Components**

Effective curriculum and instruction for gifted and talented students must incorporate the following components:

- ◆ goals that support mastery of core areas of learning,
- ◆ scope and sequence that provide meaningful organization and structure,
- ◆ learning experiences organized around complex concepts, themes, and issues,
- ◆ challenging, meaningful content that exceeds state grade-level standards,
- ◆ instruction in the processes of communicating, problem solving, and critical thinking that exceeds state grade-level standards,
- ◆ instruction in independent learning skills,
- ◆ opportunities for worldwide communication and research,
- ◆ products that reflect advanced achievement and in-depth research,
- ◆ combination of acceleration and enrichment,
- ◆ articulation with the basic core curriculum, and
- ◆ integrated, relevant assessment of student performance.

Additional curriculum resources for gifted education programs include Davis and Rimm (1998), Gallagher and Gallagher (1994), Maker and Nielson (1995), O'Tuel and Bullard (1993), and VanTassel-Baska (1992 & 1993).

A gifted and talented curriculum designed to serve culturally diverse populations should also include components such as mentorships, remediation for deficiencies in basic skills, adaptations for variant learning styles, extracurricular enrichment, counseling, and career education. Further information on serving culturally diverse populations is provided in the following references: Borland (1989, Chapter 10), Colangelo and Davis (1997), Davis and Rimm (1998, Chapter 12), and Gallagher and Gallagher (1994, Chapters 2 & 12).

## **Standards-based Curriculum**

South Carolina's emphasis on discipline-based standards is focusing the teacher of the gifted on the need to integrate discipline content and process skillfully when designing and developing curriculum. Powerful curricular experiences for high ability learners must proceed through the content standards, not around them.

Why is this content standards approach important?

- Basic content areas organize schools, and the majority of student time is allocated across academic content. By using content as our organizational framework, we increase communication and maximize learning.
- In our culture, knowledge is organized by disciplines. Professions are often based on content expertise, and many significant products of civilization are discipline-specific (e.g. novels, medicines, political treaties, fine art).
- Our current research base on conceptions of giftedness supports a content-specific organizational model. Theorists such as Gagné, Csikszentmihalyi, and Bloom suggest that giftedness is domain specific.
- The research on teaching and learning suggests that integration of content and process optimizes transfer.
- Students in South Carolina are identified and placed in gifted programs based on verbal and/or nonverbal abilities; thus, the need exists to offer students curricular experiences that are congruent with their abilities.

(Joyce Van Tassel-Baska in conversations with teachers from South Carolina at the Center for Gifted Education, College of William and Mary, February 2001.)

The curriculum for South Carolina academically gifted programs must incorporate strategies to ensure the appropriate differentiation of the South Carolina Academic Standards for the gifted learner. An effective curriculum for gifted learners is articulated across grades and addresses significant concepts across disciplines.

Teachers and coordinators involved in the design, adaptation, and development of curriculum for gifted learners must approach curriculum and instruction as a team and as colleagues. Individual teachers can no longer work in isolation to respond to the reform agenda.

## **Curriculum Goals**

State Board of Education Regulation 43:220 requires districts to develop a plan for academically gifted and talented classes that maximizes the potential of identified students. Six specific characteristics of this educational program are outlined in the regulation. The following goals are examples of the kind of curriculum goals that must be developed by districts to guide their planning of curriculum, instruction, and assessment for academically gifted programs. Districts may adopt these goals or prepare local goals provided that the curriculum goals fully reflect the requirements of Regulation 43:220.

#### GOAL ONE

*To support mastery of core areas of learning at a pace, complexity, abstractness, and depth appropriate for gifted learners.*

#### GOAL TWO

*To develop understanding of concepts, themes, and issues which are fundamental to the disciplines as well as society and to develop an appreciation for interrelationships among the disciplines.*

#### GOAL THREE

*To develop inquiry skills at a level of complexity, abstractness, and depth appropriate for gifted learners.*

#### GOAL FOUR

*To develop the skills of critical thinking, problem solving, and decision-making at a level of complexity, abstractness, and depth appropriate for gifted learners.*

#### GOAL FIVE

*To develop proficiency in communicating abstract and complex ideas, relationships, and issues.*

### **Curriculum for Academically Gifted Students**

School districts must provide a curriculum for academically gifted and talented students that is designed to support their unique characteristics and needs. This curriculum must address specific goals so that gifted and talented students have the opportunity to reach the corresponding culminating objectives for each goal. A culminating objective is what the learner will know and be able to do as the result of instructional experiences.

#### **GOAL ONE**

*To support mastery of core areas of learning at a pace, complexity, abstractness, and depth appropriate for gifted and talented learners.*

School district and teachers will ensure that gifted and talented students are appropriately challenged. Effective curriculum will address the academic strengths and weaknesses of the identified students. To accomplish this task, teachers should pre-assess students' learning (See Chapter Three in the *Best Practices Manual*) and provide instruction so that students demonstrate continuous progress.

The key to developing and designing effective curriculum to address goal one is the ability to differentiate pace, complexity, abstractness, and depth. Both acceleration and enrichment strategies must be used.

#### **GOAL ONE CULMINATING OBJECTIVE:**

In the designated curriculum area or areas, gifted and talented students will meet or exceed South Carolina Curriculum Standards.

## **GOAL TWO**

*To develop understanding of concepts, themes, and issues which are fundamental to the disciplines as well as society and to develop an appreciation for interrelationships among the disciplines.*

“Central to any vision of comprehensive curriculum for the gifted is the focus on the ideas that have guided the development of civilization as we know it. These large concepts, ideas, and themes are those that dominate all areas of knowledge exploration, yet may have specific connotations within a given discipline of thought. So the task of educators of the gifted is to seek out those ideas that can be best utilized with gifted learners at various stages of development both within and across traditional fields of inquiry.” Joyce VanTassel-Baska, *Comprehensive Curriculum for Gifted Learners* (Boston: Allyn and Bacon, 1988.)

School districts and teachers will design curriculum, instruction, and assessment so that gifted and talented students will articulate the underlying structure of the discipline(s), explain the interconnectedness of knowledge across the disciplines, and apply this understanding to current societal problems and issues.

## **GOAL TWO CULMINATING OBJECTIVES**

Gifted and talented students will

- A. Demonstrate comprehension of a discipline as a system of knowledge.
- B. Analyze the content of a discipline in terms of major concepts, themes, and issues of that discipline.
- C. Analyze a concept, theme, problem, or issue within and across disciplines by using the different perspectives of those disciplines.
- D. Analyze the ethical dimensions of ideas, issues, problems, and themes.
- E. Explain the dynamic nature of knowledge and the interaction between culture and knowledge.

## **GOAL THREE**

*To develop inquiry skills at a level of complexity, abstractness, and depth appropriate for gifted learners.*

School districts and teachers will ensure that gifted and talented students acquire the skills necessary for self-directed and life-long learning. Students will develop facility in using various technologies and sources of information to conduct inquiry appropriate to the discipline(s). The curriculum will provide students with opportunities to explore and to evaluate existing research as well as to identify and to research new areas of interest.

Students will gather, analyze, interpret, and communicate data (See Goal Five.). They will learn to plan and to organize their work, to monitor their progress, and to assess the quality of their products and presentations. In the process they will develop and exercise the traits of the reasoning mind. See Richard Paul, *Critical Thinking: What every person needs to survive in a rapidly changing world* (CA: The Foundation for Critical Thinking 1992).

### **GOAL THREE CULMINATING OBJECTIVES**

Gifted and talented students will

- A. Demonstrate inquiry skills.
  - 1. Identify a topic, problem, or issue and formulate questions for research.
  - 2. Select and apply research methodology appropriate for the topic, problem, or issue.
  - 3. Access information worldwide from primary and secondary sources by using a variety of print, electronic, and other media.
  - 4. Assess the validity, reliability, and relevance of the information collected.
  - 5. Organize and analyze data.
  - 6. Synthesize and interpret data.
  - 7. Develop conclusions and implications in the light of the problem.
  - 8. Select an appropriate medium to communicate the results of research.
- B. Demonstrate management skills.
  - 1. Plan, pace, implement, and evaluate research projects.
  - 2. Demonstrate effective allocation of time and resources
- C. Apply ethical standards in conducting and reporting research. (See Paul Leedy and Jeanne Ormrod, *Practical Research* Seventh Edition, Merrill: 2001 or Gary W. Heiman, *Research Methods in Psychology* Second Edition, Houghton Mifflin: 1999.)
- D. Apply intellectual standards and aesthetic criteria to assess the quality of their research products and presentations.

### **GOAL FOUR**

*To develop the skills of critical and creative thinking, problem solving, and decision-making at a level of complexity, abstractness, and depth appropriate for gifted learners.*

School districts and teachers will incorporate models of critical and creative thinking, problem solving, and decision making so that students develop a repertoire of strategies to apply in the context of significant content.

As they learn reasoning strategies, students will apply intellectual standards (clarity, specificity, relevance, logic, breadth, significance, fairness, precision, accuracy, consistency, depth, completeness, adequacy) to assess the quality of their thinking. (See Paul, 1992).

### **GOAL FOUR CULMINATING OBJECTIVES**

Gifted and talented students will

- A. Demonstrate effective use of critical and creative thinking skills.
  - 1. Apply the cognitive processes of application, analysis, synthesis, and evaluation.
  - 2. Apply basic argument forms (i.e., induction and deduction).
  - 3. Reason logically (define the central issue, analyze assumptions, select appropriate data or evidence, determine central concepts, distinguish points of view, develop valid inferences, determine purpose, and analyze implications). (Paul, 1992)
  - 4. Apply the divergent thinking processes of fluency, flexibility, elaboration, and originality.
- B. Demonstrate effective use of problem-solving and decision-making strategies.

- C. Evaluate the quality and appropriateness of arguments, lines of reasoning, and solutions in terms of both ethical and intellectual standards.
- D. Analyze the content, structure, value, aesthetic qualities, and historical context of products of creative thinking.

## **GOAL FIVE**

*To develop proficiency in communicating abstract and complex ideas, relationships, and issues.*

School districts and teachers will provide learning experiences for gifted and talented students to develop the ability to communicate ideas, issues, and relationships in effectively manners using multiple forms and technologies. Districts and schools will provide opportunities for students to demonstrate transformation of learning through the creation of products and presentations appropriate for both content and audience.

## **GOAL FIVE CULMINATING OBJECTIVES:**

Gifted and talented students will

- A. Synthesize knowledge and skills to communicate ideas, relationships, and issues effectively through products and presentations.
- B. Analyze and evaluate the quality, effectiveness, and substantive content of products and presentations.

## **Instructional Provisions for Gifted and Talented Students in the General Education Classroom**

In addition to the services provided through gifted and talented program models, districts should attend to instructional provisions for gifted and talented students in the general education classroom. Depending on the nature of the gifted and talented program being implemented, identified students may spend the majority of their school time in a regular heterogeneous classroom. These students are gifted and talented 100 percent of the time, not just the percentage of time spent in a pull-out program or special class.

How have teachers in the regular classroom typically addressed the needs of gifted and talented students? A national survey of 3600 elementary teachers indicated that few, if any, modifications were made for gifted and talented students (Archambault, Westberg, Brown, Hallmark, Emmons, & Zhang, 1993). When change did occur, it was likely to be passive—an increase in the workload. The results of this survey were borne out in an observational study conducted in 46 classrooms across the nation (Westberg, Archambault, Dobyns, & Salvin, 1993). In the regular classroom, 84 percent of the instructional activities were the same for all students, whether gifted or not.

Research has shown that if every child is to be challenged to develop to maximum potential, “one size” will not “fit all.” Equal opportunity does not and should not mean identical content and activities for all students. To accommodate the needs of gifted and talented students in the general education classroom, curriculum and instruction must be flexible in aspects such as pace, depth, complexity, and novelty.

What, then, can teachers do to meet the needs of gifted and talented students in the general education classroom? Presented in the following sections are recommended curricular and instructional provisions with regard to content, process, product, and the learning environment.

## **Content Recommendations**

- ◆ Use pre-assessment techniques to establish what students already know. Do not re-teach the mastered content to those students.
- ◆ Increase the pace of learning for gifted and talented students by compressing the curriculum in terms of skills and/or knowledge areas.
- ◆ Adjust the complexity of objectives that gifted and talented students are required to achieve.
- ◆ Provide more complex/abstract materials for gifted and talented students.
- ◆ Provide mentors for gifted and talented students who demonstrate unusual interest in specific content areas.
- ◆ Allow students time to reflect and construct meaning.

## **Process Recommendations**

- ◆ Teach strategies that students need to process content and to create products.
- ◆ Give students choices throughout the instructional process—in topics, ways of learning, modes of expression, and working conditions.
- ◆ Use a variety of modes to present or introduce information.
- ◆ Give students open-ended tasks to encourage exploration.
- ◆ Use flexibility in assigning groups and tasks.
- ◆ Allow students to work independently some of the time and collaboratively in groups at other times. (The majority of a student's time in groupwork should be spent with intellectual peers.)
- ◆ Structure a metacognitive approach for accomplishing academic tasks.
- ◆ Make sure that all students are actively participating in the learning process. It is essential that gifted and talented students be engaged in their learning.



## **Product Recommendations**

- ◆ Encourage student choice and originality in the creation of products. Allow students to use a variety of media and techniques to produce their creations.
- ◆ Encourage students to create products that demonstrate more complex and in-depth mastery of content—e.g., independent study projects, special reports, research summaries, simulations, presentations, demonstrations.
- ◆ Require self-evaluation of all products as part of the metacognitive process.

## **Learning Environment Recommendations**

- ◆ Create a safe, risk-free learning environment to facilitate student selection of appropriately challenging tasks.
- ◆ Require student-to-student dialogue and discussion.
- ◆ Balance teacher-talk with student-talk.
- ◆ Listen respectfully to what students have to say.
- ◆ Open the classroom to new ideas and resources.
- ◆ Create an inviting environment for advanced learning.
- ◆ Encourage and model acceptance of the unique abilities and needs of each student in the classroom.

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